

G<sup>4</sup> - In an embodiment of this invention, the GABA<sub>B</sub>R1a polypeptide has an amino acid sequence identical to the amino acid sequence shown in Figures 24A-24D (SEQ ID NO: 56) and the GABA<sub>B</sub>R1b polypeptide has an amino acid sequence identical to the amino acid sequence shown in Figures 25A-25D (SEQ ID NO: 55). --

In the Claims:

Please amend claims 208, 213, 224, 230, and 231 as follows:

G<sup>5</sup> -208. (Four Times Amended) A process for determining whether a chemical compound is an agonist of a mammalian GABA<sub>B</sub>R1/R2 receptor which comprises contacting cells containing nucleic acid encoding, and expressing on their cell surface, the GABA<sub>B</sub>R1/R2 receptor, wherein such cells prior to being transfected with such nucleic acid do not express the GABA<sub>B</sub>R1/R2 receptor, with the compound under conditions permitting the activation of the GABA<sub>B</sub>R1/R2 receptor, and detecting an increase in activity of the GABA<sub>B</sub>R1/R2 receptor, wherein said increase in activity indicates that the compound is an agonist of a GABA<sub>B</sub>R1/R2 receptor, wherein the mammalian GABA<sub>B</sub>R1/R2 receptor comprises a GABA<sub>B</sub>R1 polypeptide and a GABA<sub>B</sub>R2 polypeptide, which GABA<sub>B</sub>R1 polypeptide has an amino acid sequence identical to the amino acid sequence shown in Figures 24A-24D (SEQ ID NO: 56) or Figures 25A-25D (SEQ ID NO: 55), and which GABA<sub>B</sub>R2 polypeptide has an amino acid sequence (a) identical to the amino acid sequence shown in Figures 4A-4D (SEQ ID NO: 4) or Figures 23A-23D (SEQ ID NO: 47), or (b) encoded by a nucleic acid sequence identical to the receptor-encoding nucleic acid sequence contained in plasmid pEXJT3T7-hGABAB2

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(ATCC Accession No. 203515) or in plasmid BO-55 (ATCC Accession No. 209104).--

-213.

(Three Times Amended) A process for determining whether a chemical compound activates a mammalian GABA<sub>B</sub>R1/R2 receptor, which comprises contacting cells producing a second messenger response and expressing on their cell surface the GABA<sub>B</sub>R1/R2 receptor, wherein such cells prior to being transfected with such nucleic acid do not express the GABA<sub>B</sub>R1/R2 receptor, with the chemical compound under conditions suitable for activation of the GABA<sub>B</sub>R1/R2 receptor, and measuring the second messenger response in the presence and in the absence of the chemical compound, a change in the second messenger response in the presence of the chemical compound indicating that the compound activates the GABA<sub>B</sub>R1/R2 receptor, wherein the mammalian GABA<sub>B</sub>R1/R2 receptor comprises a GABA<sub>B</sub>R1 polypeptide and a GABA<sub>B</sub>R2 polypeptide, which GABA<sub>B</sub>R1 polypeptide has an amino acid sequence identical to the amino acid sequence shown in Figures 24A-24D (SEQ ID NO: 56) or Figures 25A-25D (SEQ ID NO: 55), and which GABA<sub>B</sub>R2 polypeptide has an amino acid sequence (a) identical to the amino acid sequence shown in Figures 4A-4D (SEQ ID NO: 4) or Figures 23A-23D (SEQ ID NO: 47), or (b) encoded by a nucleic acid sequence identical to the receptor-encoding nucleic acid sequence contained in plasmid pEXJT3T7-hGABAB2 (ATCC Accession No. 203515) or in plasmid BO-55 (ATCC Accession No. 209104).--

-224.

(Four Times Amended) A method of screening a plurality of chemical compounds to determine whether any

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compound within such plurality of chemical compounds activates the GABA<sub>B</sub>R1/R2 receptor, wherein the mammalian GABA<sub>B</sub>R1/R2 receptor comprises a GABA<sub>B</sub>R1 polypeptide and a GABA<sub>B</sub>R2 polypeptide, which GABA<sub>B</sub>R1 polypeptide has an amino acid sequence identical to the amino acid sequence shown in Figures 24A-24D (SEQ ID NO: 56) or Figures 25A-25D (SEQ ID NO: 55), and which GABA<sub>B</sub>R2 polypeptide has an amino acid sequence (a) identical to the amino acid sequence shown in Figures 4A-4D (SEQ ID NO: 4) or Figures 23A-23D (SEQ ID NO: 47), or (b) encoded by a nucleic acid sequence identical to the receptor-encoding nucleic acid sequence contained in plasmid pEXJT3T7-hGABAB2 (ATCC Accession No. 203515) or in plasmid BO-55 (ATCC Accession No. 209104) which comprises:

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- (a) contacting cells containing nucleic acid encoding, and expressing on their cell surface, the GABA<sub>B</sub>R1/R2 receptor, wherein such cells prior to being transfected with such nucleic acid do not express the GABA<sub>B</sub>R1/R2 receptor, with the plurality of compounds, under conditions permitting activation of the GABA<sub>B</sub>R1/R2 receptor;
  - (b) determining whether the activity of the GABA<sub>B</sub>R1/R2 receptor is increased in the presence of the compounds, and if it is increased;
  - (c) separately determining whether the activation of the GABA<sub>B</sub>R1/R2 receptor is increased by each compound included in the plurality of compounds, so as to thereby determine whether any compound or compounds present in such plurality of compounds activates the

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GABA<sub>B</sub>R1/R2 receptor. --

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-230. (Amended) The method of claim 250, wherein the non-neuronal cell is a COS-7 cell, a 293 human embryonic kidney cell, a LM(tk-) cell or an NIH-3T3 cell --

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-231. (Three Times Amended) A process for determining whether a chemical compound is an agonist of a mammalian GABA<sub>B</sub>R1/R2 receptor, which comprises preparing a membrane fraction from cells which comprise nucleic acid encoding, and expressing on their cell surface, the GABA<sub>B</sub>R1/R2 receptor, wherein such cells prior to being transfected with such nucleic acid do not express the GABA<sub>B</sub>R1/R2 receptor, separately contacting the membrane fraction with both the chemical compound and GTPγS, and with only GTPγS, under conditions permitting the activation of the GABA<sub>B</sub>R1/R2 receptor, and detecting GTPγS binding to the membrane fraction, an increase in GTPγS binding in the presence of the compound indicating that the chemical compound activates the GABA<sub>B</sub>R1/R2 receptor, wherein the mammalian GABA<sub>B</sub>R1/R2 receptor comprises a GABA<sub>B</sub>R1 polypeptide and a GABA<sub>B</sub>R2 polypeptide, which GABA<sub>B</sub>R1 polypeptide has an amino acid sequence identical to the amino acid sequence shown in Figures 24A-24D (SEQ ID NO: 56) or Figures 25A-25D (SEQ ID NO: 55), and which GABA<sub>B</sub>R2 polypeptide has an amino acid sequence (a) identical to the amino acid sequence shown in Figures 4A-4D (SEQ ID NO: 4) or Figures 23A-23D (SEQ ID NO: 47), or (b) encoded by a nucleic acid sequence identical to the receptor-encoding nucleic acid sequence contained in plasmid pEXJT3T7-hGABAB2 (ATCC Accession No. 203515) or in plasmid BO-55 (ATCC